REMARKS

Claims 21-32 are currently pending. Claims 33-40 currently stand withdrawn. By this amendment, Claims 21, 24, 26 and 27 have been amended, Claim 25 has been canceled, withdrawn Claims 33-40 have been canceled and new Claims 41-50 have been added. New Claims 42-50 are directed to methods of making and using a sensing device as in amended Claim 21. Upon allowance of product claims, Applicants will seek rejoinder of any pending withdrawn process claims that depend from or otherwise require all the limitations of an allowable product claim. Support for the new claims is found in the specification and claims as filed. Cancellation or amendment of certain claims is not to be construed as a dedication to the public of any of the subject matter of the claims as previously presented, and Applicants reserve the ability to pursue the amended claims as filed, the canceled claims or similar claims in one or more other applications, e.g., continuation, divisional, or continuation-in-part applications.

Restriction Requirement

A Restriction Requirement has been imposed. In connection therewith, it is asserted that the application claims the following inventions: Group I, including Claims 21-32 and 35; and Group II, including Claims 33, 34, and 36-40. It is asserted that the claims do not share a special technical feature that makes a contribution over the prior art, namely, Yousaf et al. (PNAS, 2001). Applicants hereby elect the invention of Group I, including Claims 21-24 and 26-32 (Claim 25 has been canceled), drawn to a sensing device comprising a micro-electronically addressable sensor surface, with traverse.

Applicants have amended Claim 21, and as discussed below, Applicants believe that Claim 21 and its dependent claims are novel and non-obvious over Yousaf et al. Applicants further believe that Claim 21 and newly added method Claims 42-50 share a special technical feature that makes a contribution over the prior art. Upon allowance of product claims, Applicants will seek rejoinder of any pending withdrawn process claims that depend from or otherwise require all the limitations of the allowable product claim.

Claim Rejection - 35 U.S.C. § 102(b) – Yousaf et al.

Claims 21-32 and 35 have been rejected under 35 U.S.C. §102(b) as anticipated by Yousaf et al. (PNAS, 2001). "A rejection for anticipation under section 102 requires that each and every

limitation of the claimed invention be disclosed in a single prior art reference." *See, e.g., In re Paulsen*, 31 U.S.P.Q.2d 1671 (Fed. Cir. 1994).

Claim 21 as amended, from which Claims 22-32 and 35 depend, recites "[a] patterned, localized, and individually addressable microelectronic sensor, the sensor comprising an individually addressable activation element and a plurality of self-aligned recognition molecules covalently bound to a sensor surface comprising an anchoring layer, wherein the activation element is a thermal activation element configured to adjust a temperature of a part of the anchoring layer and the anchoring layer's immediate surroundings or is an electrochemical activation element configured to adjust an oxidation state of a part of the anchoring layer through a locally applied voltage or current, wherein the part of the anchoring layer has an area of less than 1 mm^2, wherein a volume of the part of the anchoring layer's immediate surroundings, measured as extending into a space accessible by the recognition molecules, is less than 1 mm^3, and wherein the sensor is configured to electrically detect or electrically sense a specific binding between the recognition molecules and an analyte."

Yousaf et al. does not teach all elements of Applicants' Claim 21. Yousaf et al. is directed to a method based on use of an electroactive mask to direct the attachment of a first cell type, followed by electrochemical modulation of the surface to permit attachment of the second cell type to the previously inert regions. See page 5992, second column, second paragraph of Yousaf et al. As discussed in the application as filed, Applicants have developed a method enabling localized and patterned deposition of self-aligned recognition molecules on a sensor surface. Applicant's method uses an activation element for localized deposition instead of a mask. If a thermal activation element is employed, it is configured to heat or cool a 1 mm^2 area of the anchoring layer and a less than 1 mm^3 volume of its immediate surroundings. If an electrochemical activation element is employed, it is configured to adjust an oxidation state of a 1 mm^2 area of the anchoring layer through a locally applied voltage or current. Such an activation element is not taught by Yousaf et al. Although, Yousaf et al. teaches electrochemical modulation of the surface, this is a bulk process applied to the substrate as a whole (see, e.g., page 5992, second column, paragraph entitled "Preparation of Cocultures", describing application of a potential to the gold substrate), and not the localized modulation of Applicants' method.

Applicants further note that Yousaf et al. includes no disclosure relating to thermal activation elements. Any heat generated by a resistor in the potentiostat would merely heat the potentiostat. There is no teaching of how the potentiostat could be rendered capable of heating or cooling any portion of the substrate.

Because Yousaf et al. does not disclose every element of Applicants' claims, it therefore cannot be considered as an anticipating reference under 35 U.S.C. § 102(b). Accordingly, and for at least this reason, Applicants respectfully request that the rejection be withdrawn.

Conclusion

Should the Examiner have any concerns that might prevent the prompt allowance of the application, the Examiner is respectfully invited to contact the undersigned at the telephone number below.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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Dated: August 20, 2010

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